

HUMAN ANATOMY AND HOMEOSTASIS PROJECT:

This project is a way for you to summarize and demonstrate your understanding of the balance of systems within the human organism. You are invited to personalize your summary with your choice of situation that you would like to analyze the human body in.



While you are encouraged to use diagrams, pictures and visuals from internet sources, all text and labeling must be your own. You will need to include a bibliography of the sources of information that you use to generate your presentation. This bibliography can be created using easybib.com.

Possible situations: Athlete, air traffic controller, armed forces, scuba diver, astronaut, moon colonist, differently abled person, person coping with a disease or condition, long range trucker, computer programmer, etc.



Your planned project must be proposed and approved by February 14.

Your project, presentation or demonstration must include information about the structure and function of the following processes and systems that clearly show your level of understanding:

1. How are muscles, bones, and joints involved or affected in your option? (Skeletal and muscular systems – show a clear understanding of how they work and interact)
2. How do these cells/tissues get the energy they need function (How do the cells obtain glucose and how is glucose turned into ATP (cell respiration)?) Include detailed descriptions/illustrations of how food is turned into glucose and how that glucose gets to the cells. Describe also how oxygen gets from outside the body to the cells for aerobic respiration. (Digestive, respiratory and circulatory systems)
3. In what ways does the nervous system interact with the rest of the body under these conditions? What parts of the nervous system are responsible for what activities?
4. How does the body maintain homeostasis over long periods of time? How does the body get rid of waste from cellular respiration and other waste products from muscle use? How does the body regulate pH and internal body temperature? (Excretory and skin systems)
5. How do nutrition choices affect health in this situation? What food choices can be made to keep the body healthy? What nutrients are needed and how are they provided?



Project Choices: You may choose from any of the following options as a method to present your information: Creative story, PowerPoint presentation, poster, storyboard or comic strip, textbook entry, newspaper or magazine article, or other project type of your choice with teacher approval.

Project Proposal information:

What situation will you present? Will you be working with a partner? How will you get work done outside of class time? How will you present your project? What resources will you need to arrange for in order to complete your project?